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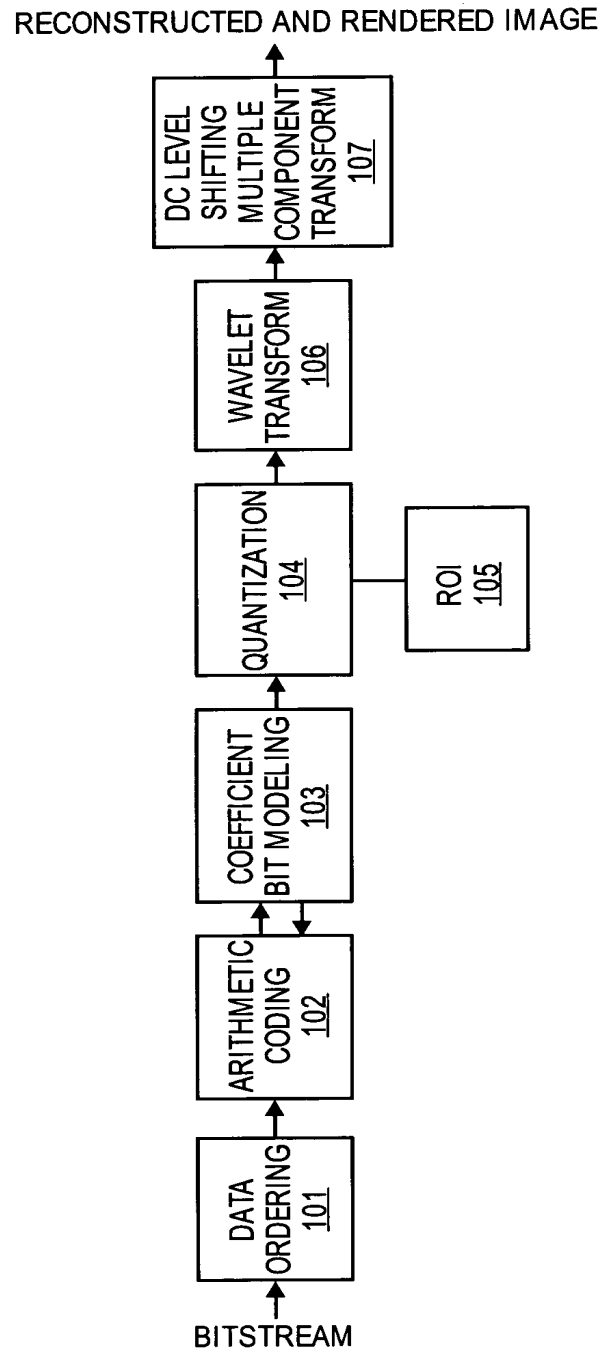


FIG. 1  
(PRIOR ART)

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SP 0	SP 4	C 8	C 12	C 16	C 20	C 24	C 28
R 1	SP 5	C 9	C 13	C 17	C 21	C 25	C 29
R 2	SP 6	SP 10	SP 14	SP 18	C 22	C 26	C 30
SP 3	SP 7	R 11	R 15	SP 19	C 23	C 27	C 31
C 32	SP 36	SP 40	SP 44	SP 48	C 52	C 56	C 60
C 33	C 37	C 41	C 45	C 49	C 53	C 57	C 61
C 34	C 38	C 42	C 46	C 50	C 54	C 58	C 62
C 25	C 39	C 43	C 47	C 51	C 55	C 59	C 63

FIG. 2A  
(PRIOR ART)

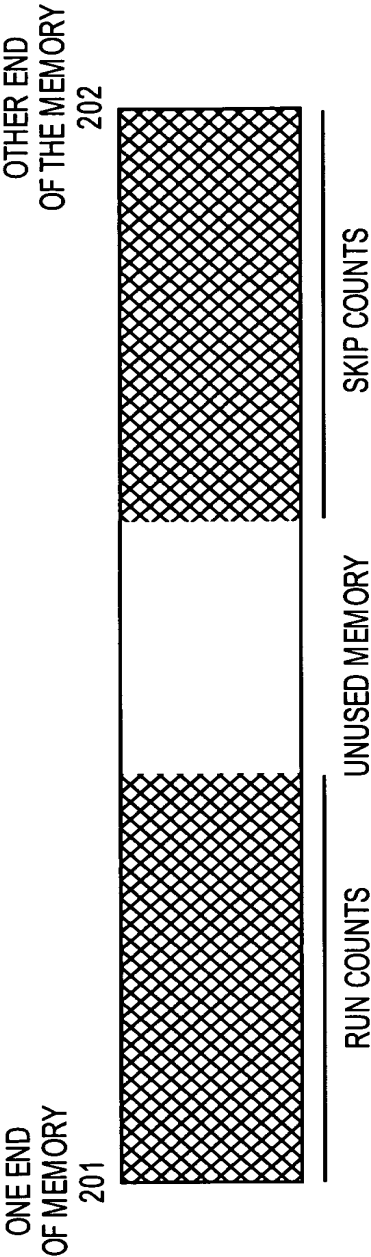


FIG. 2B

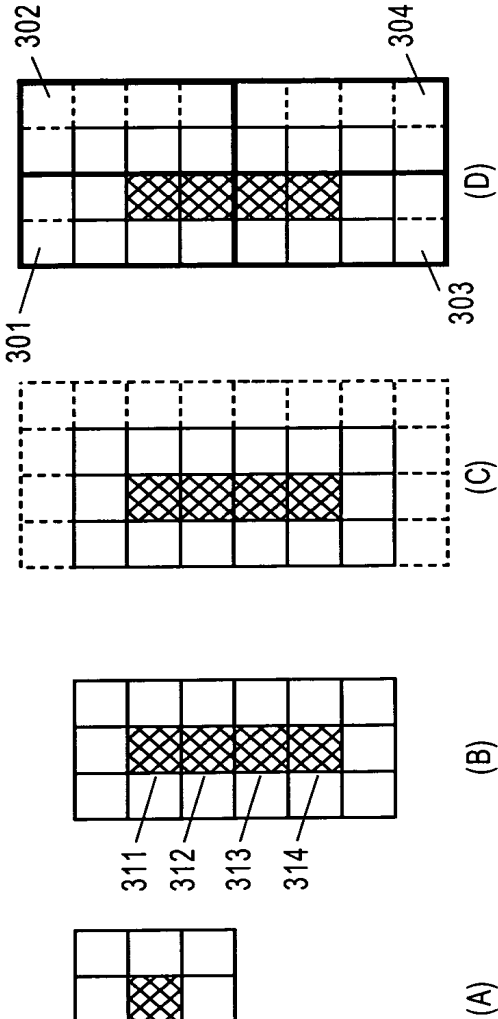


FIG. 3

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	0	1	2	3	4	5	6	7
0	A		B		A		B	
1	C		D		C		D	
2	A		B		A		B	
3	C		D		C		D	
0	A		B		A		B	

FIG. 4

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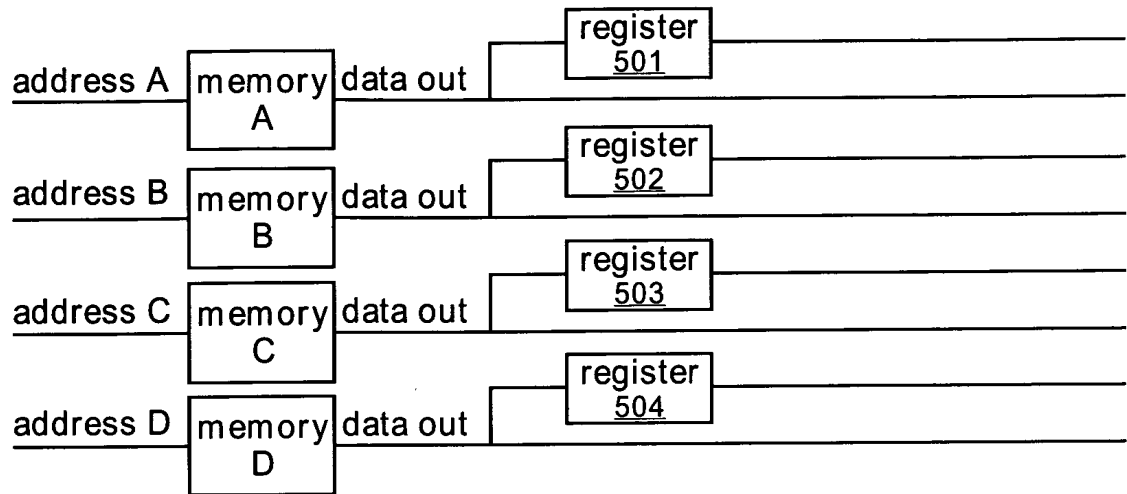


FIG. 5

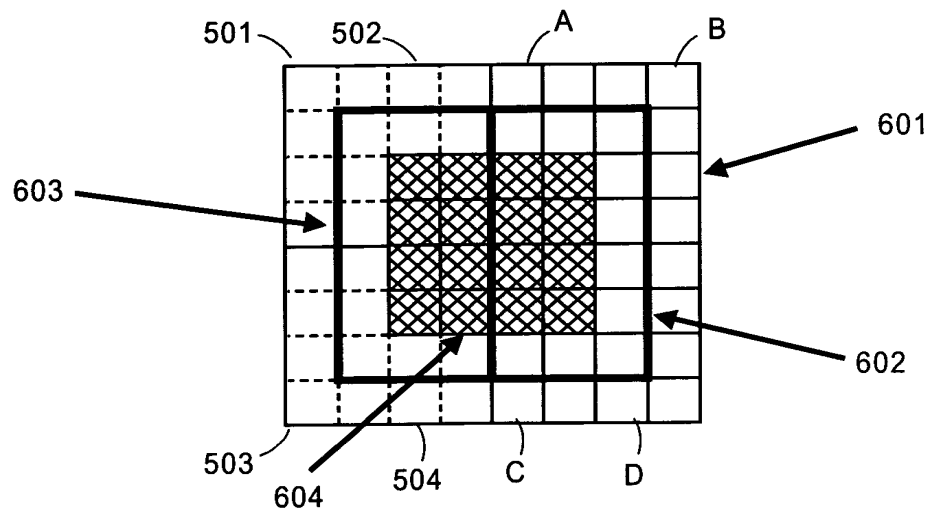


FIG. 6

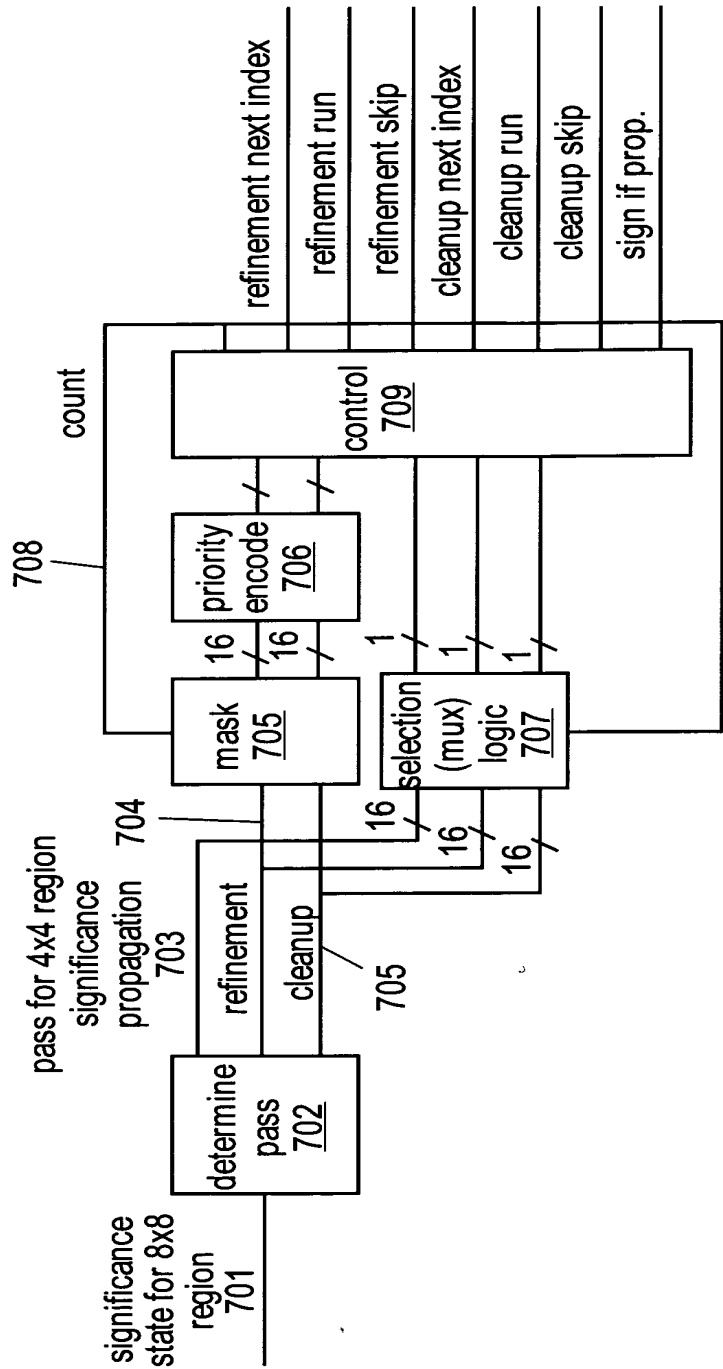


FIG. 7

SP	SP	SP	SP
C	C	C	C
SP	SP	SP	SP
SP	R	R	SP

SP = significance propagation  
C = cleanup  
R = refinement

SP pass:  $10 \times 2$  for SP pass coefficients  
6 for C and R pass coefficients  
C pass:  $4 \times 2$  for C pass coefficients  
R pass: 2 for R pass  
total: 36 clocks = 2.25 clocks per coefficient

FIG. 8

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	0	1	2	3
0	A	A	A	A
1	B	B	B	B
2	A	A	A	A
3	B	B	B	B
0	A	A	A	A

FIG. 9

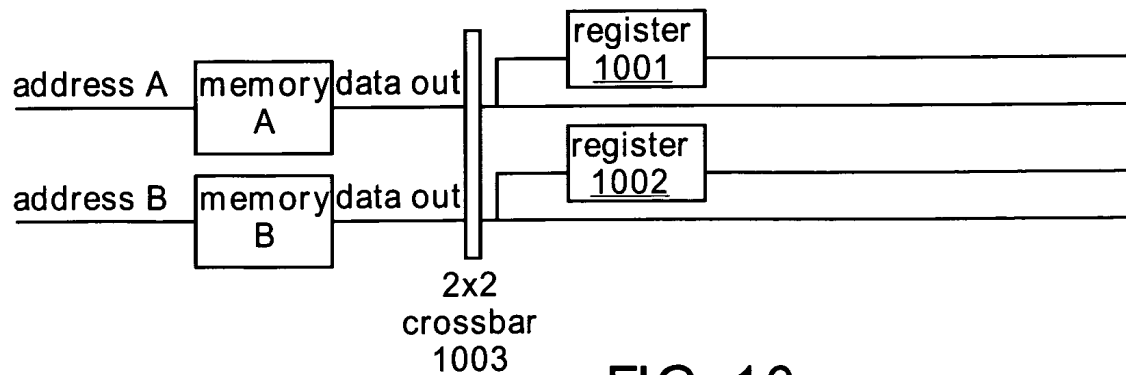


FIG. 10

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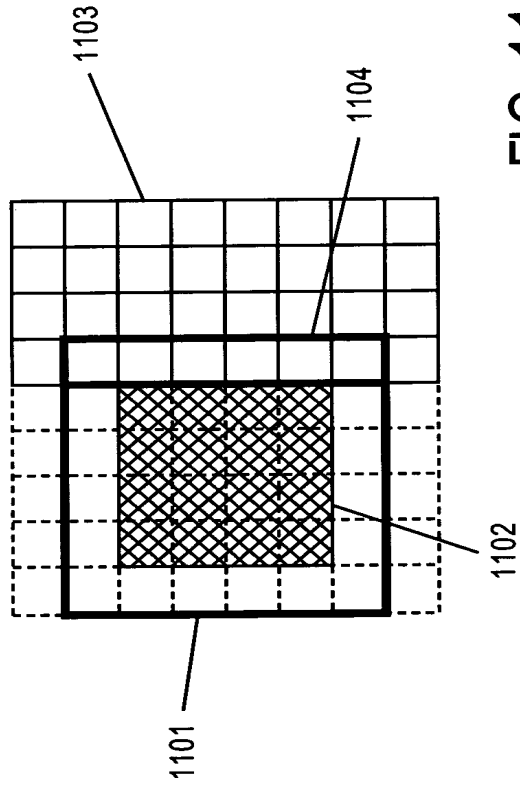


FIG. 11

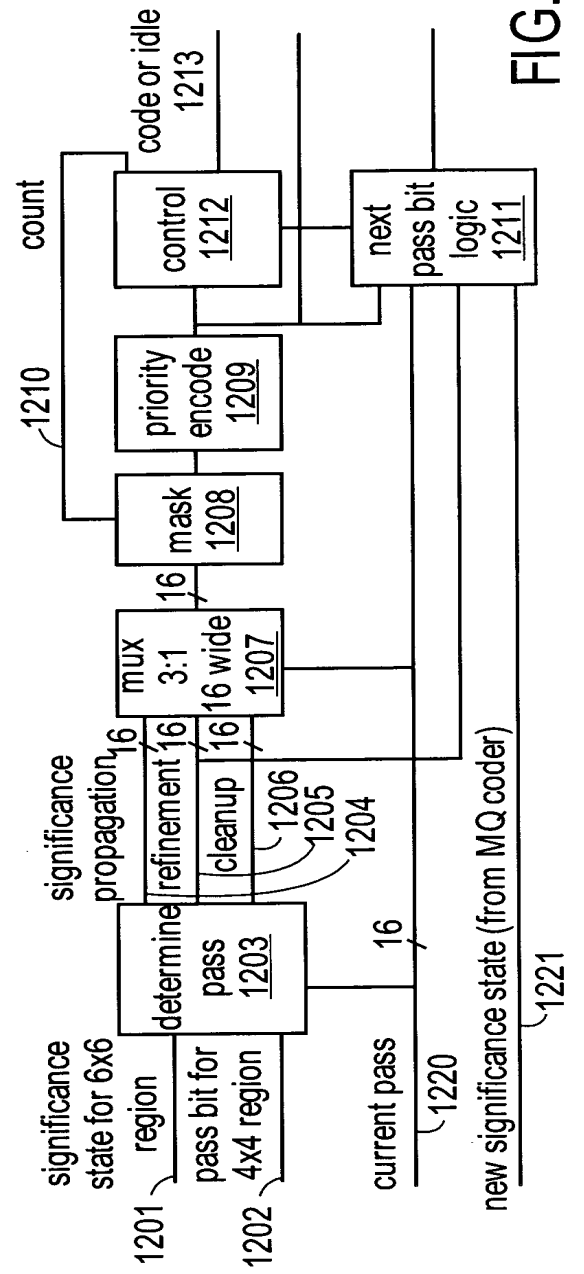


FIG. 12



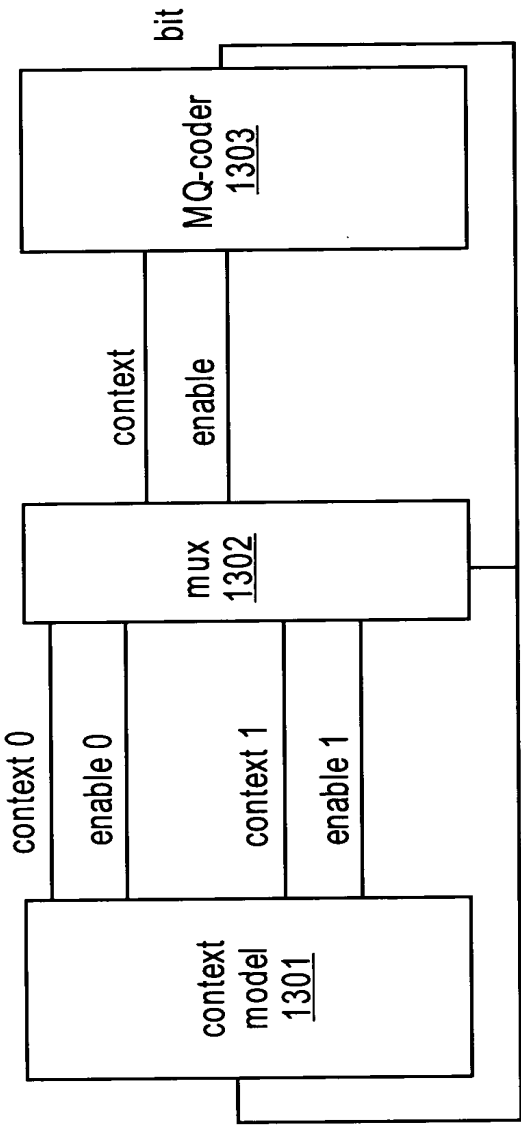


FIG. 13

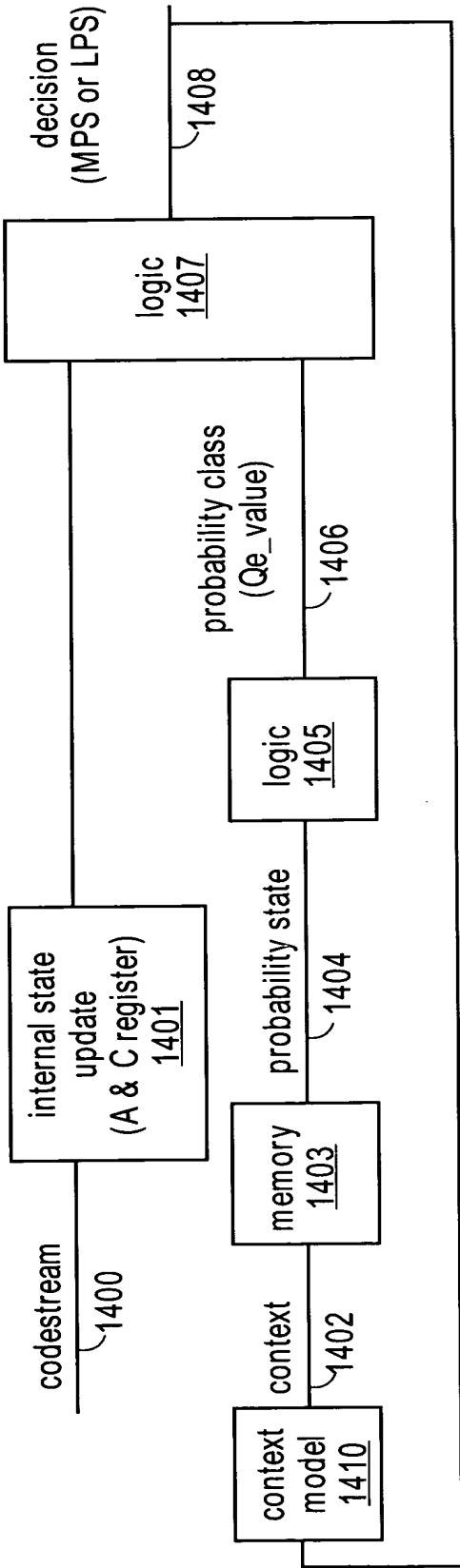


FIG. 14A

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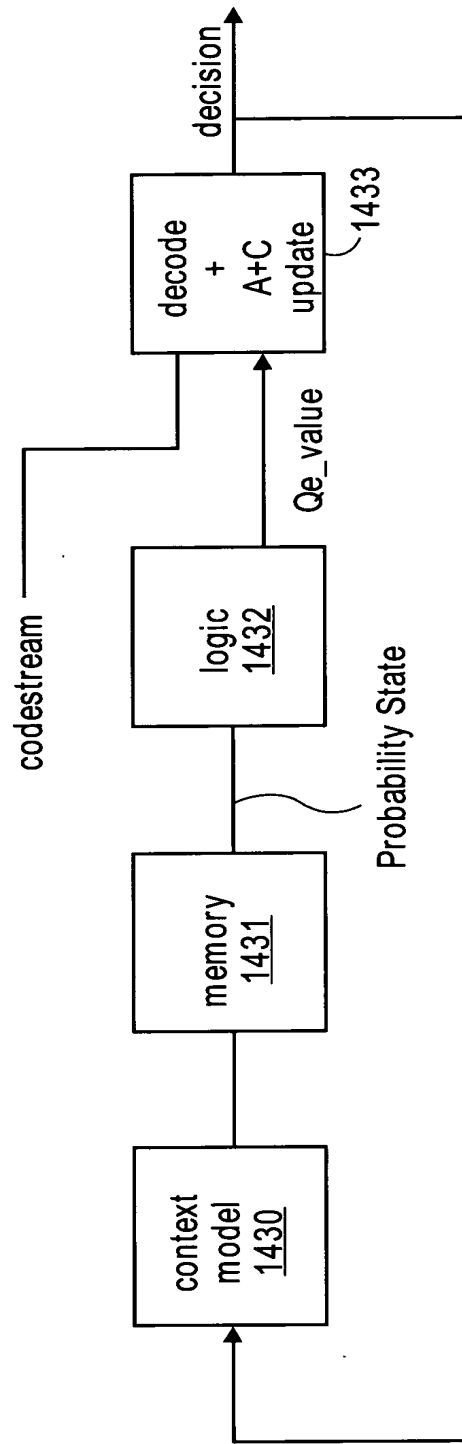


FIG. 14B

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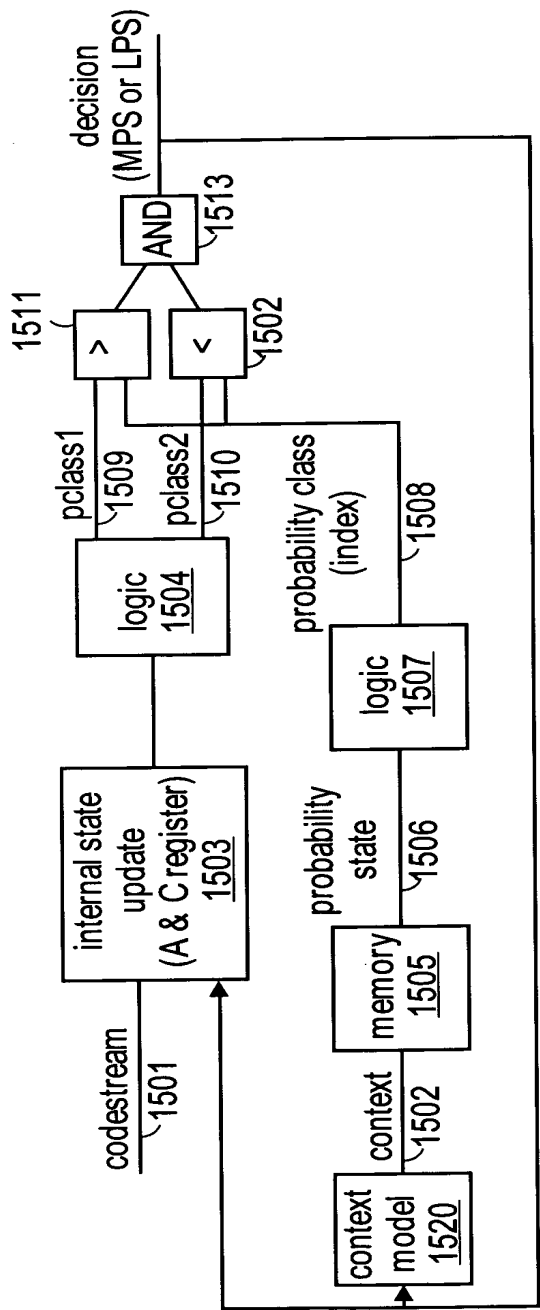


FIG. 15

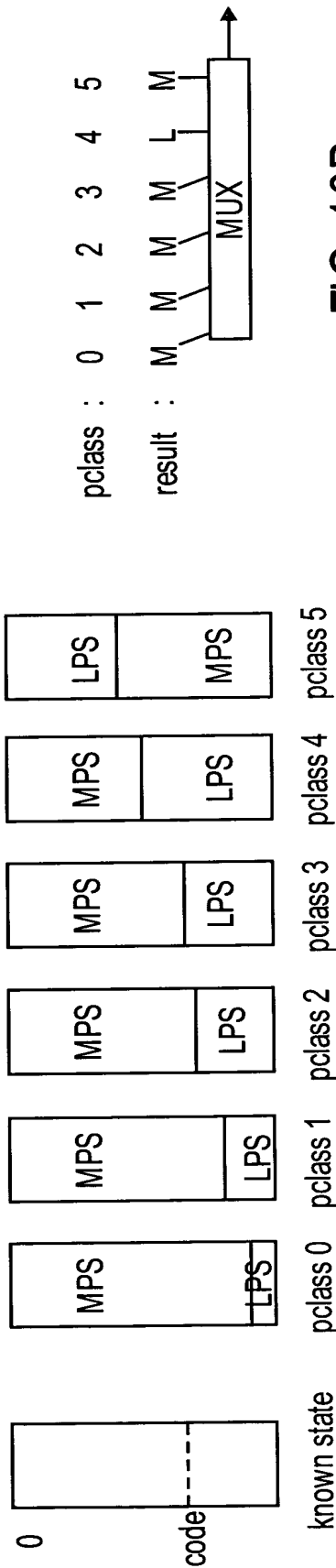


FIG. 16B

FIG. 16A

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5MPS
4 MPS
3 MPS
2 MPS
1 MPS
LPS

FIG. 17

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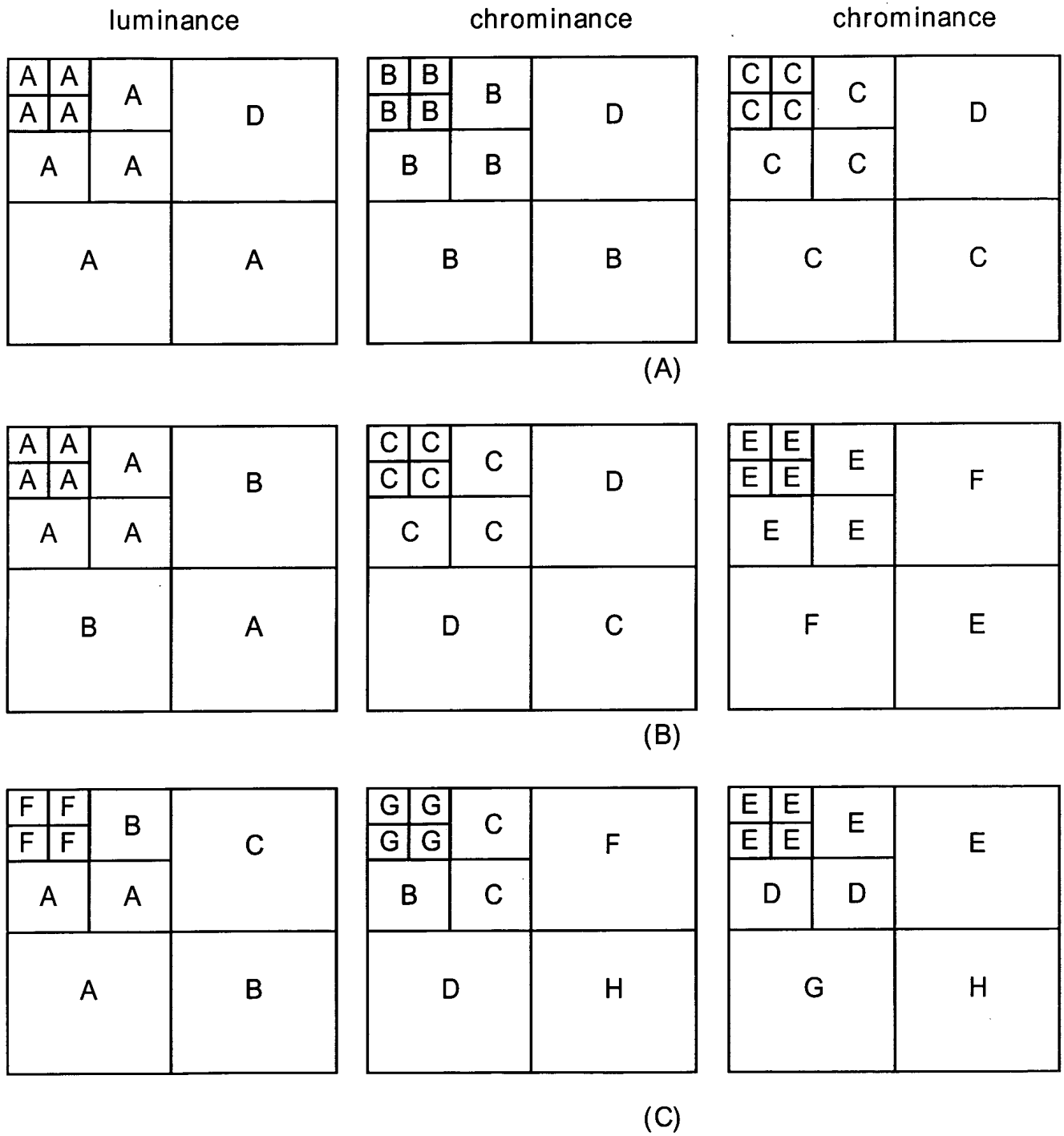


FIG. 18

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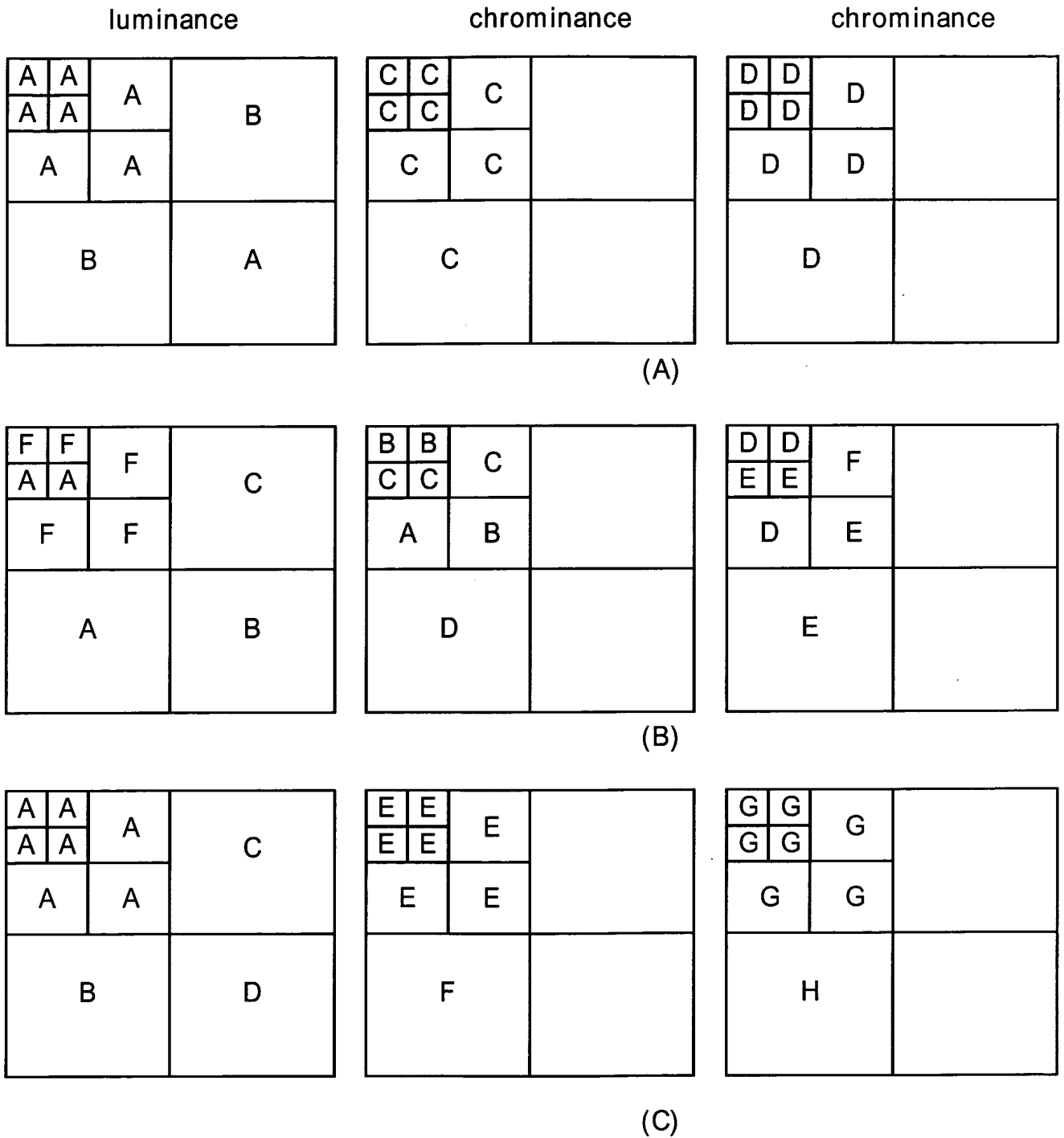


FIG. 19

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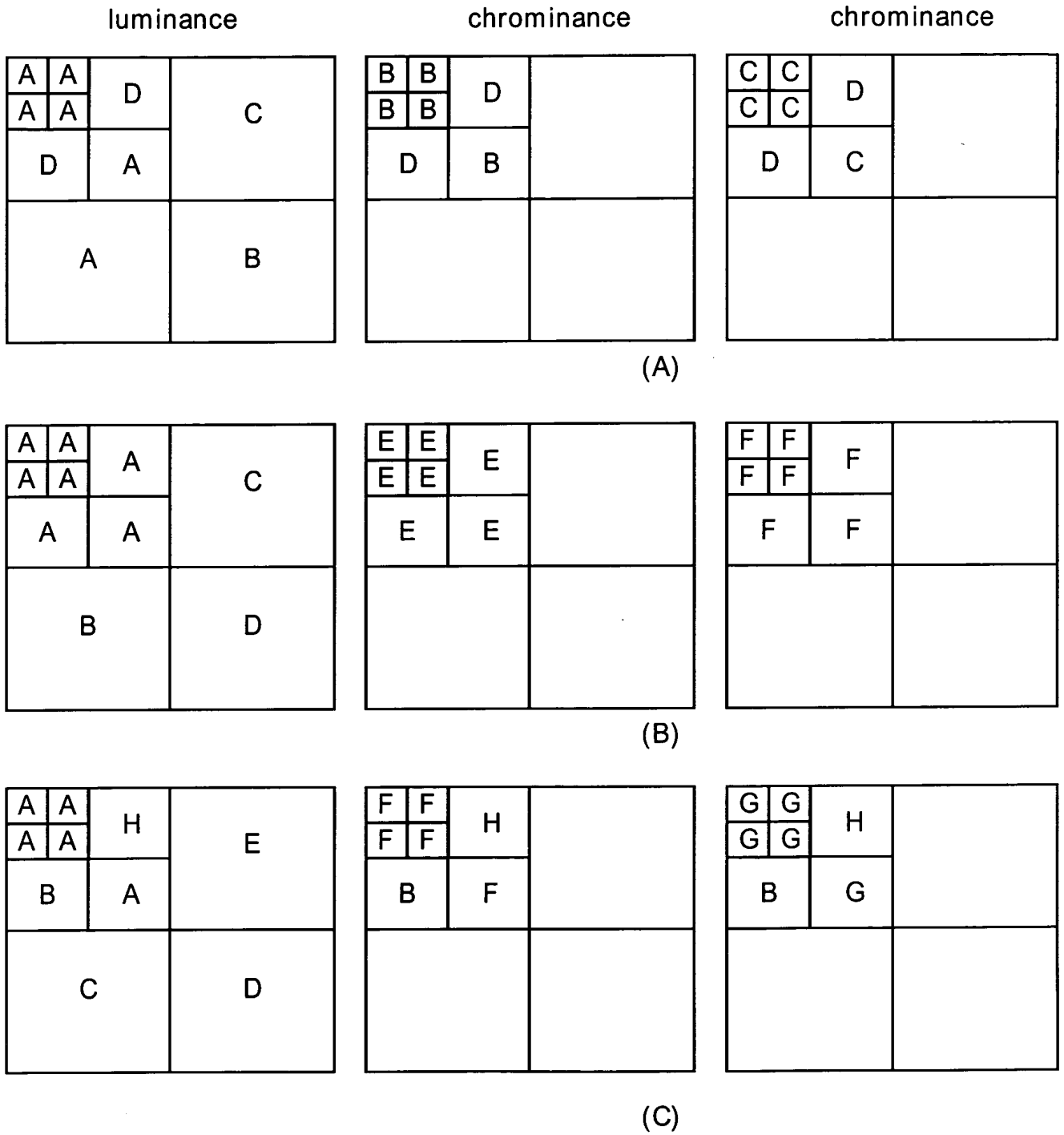


FIG. 20

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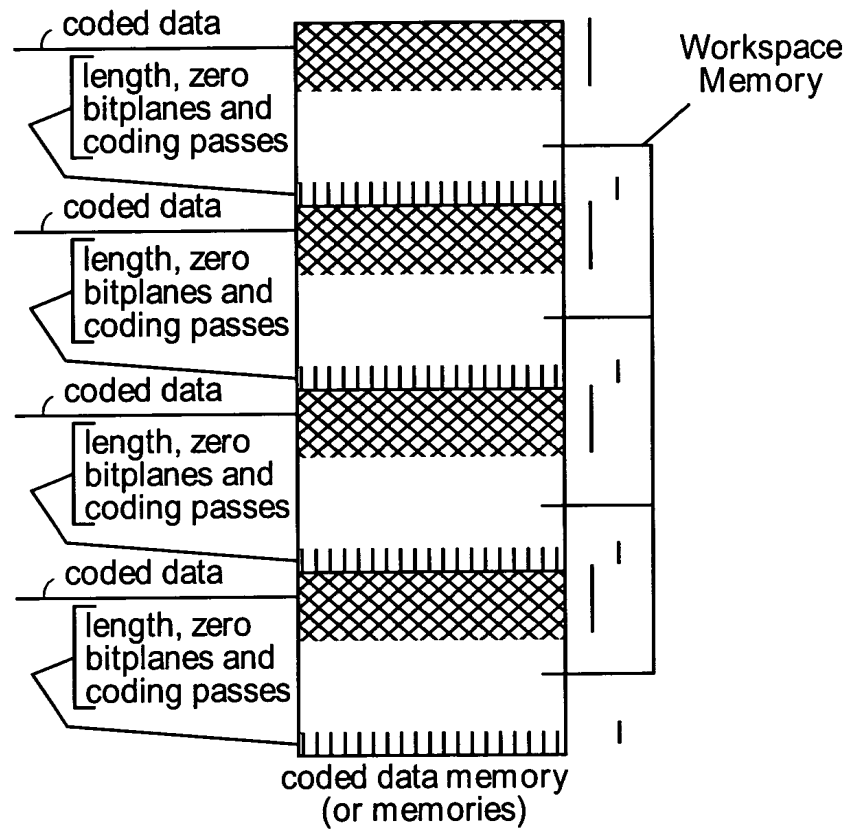
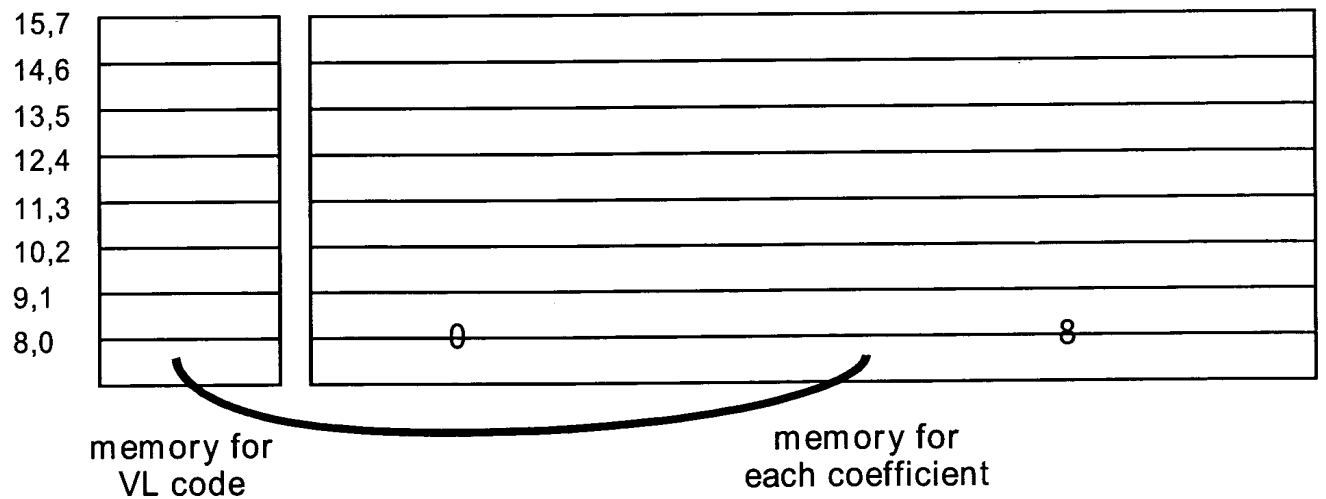
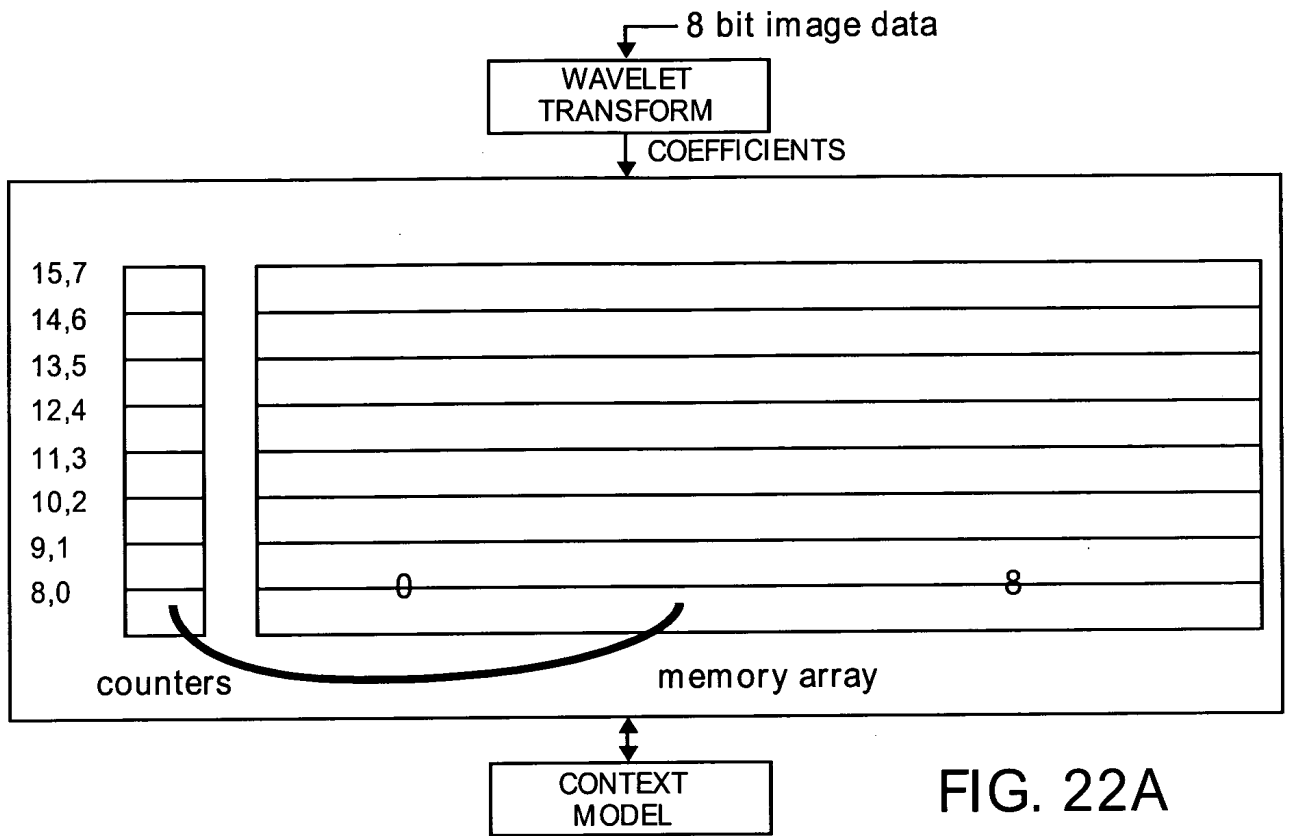


FIG. 21



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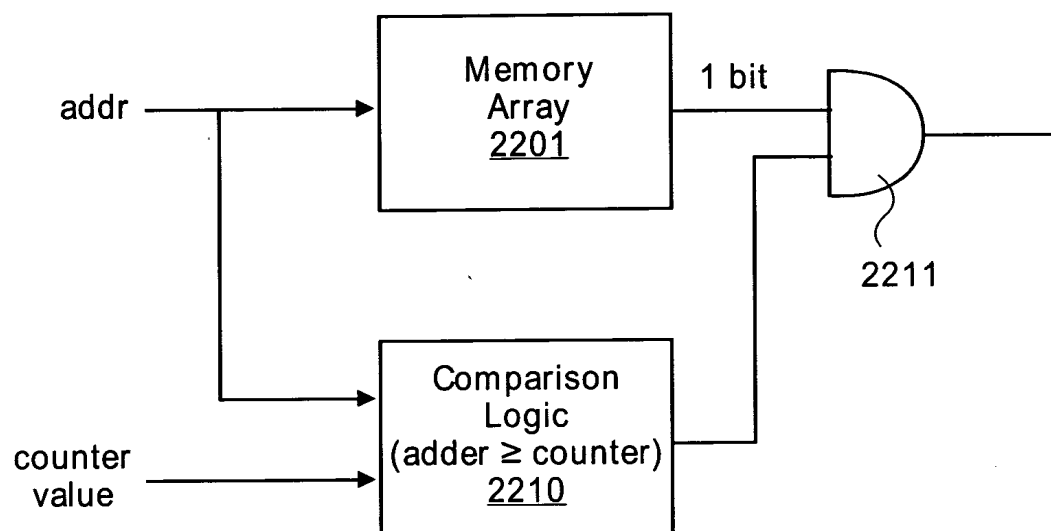
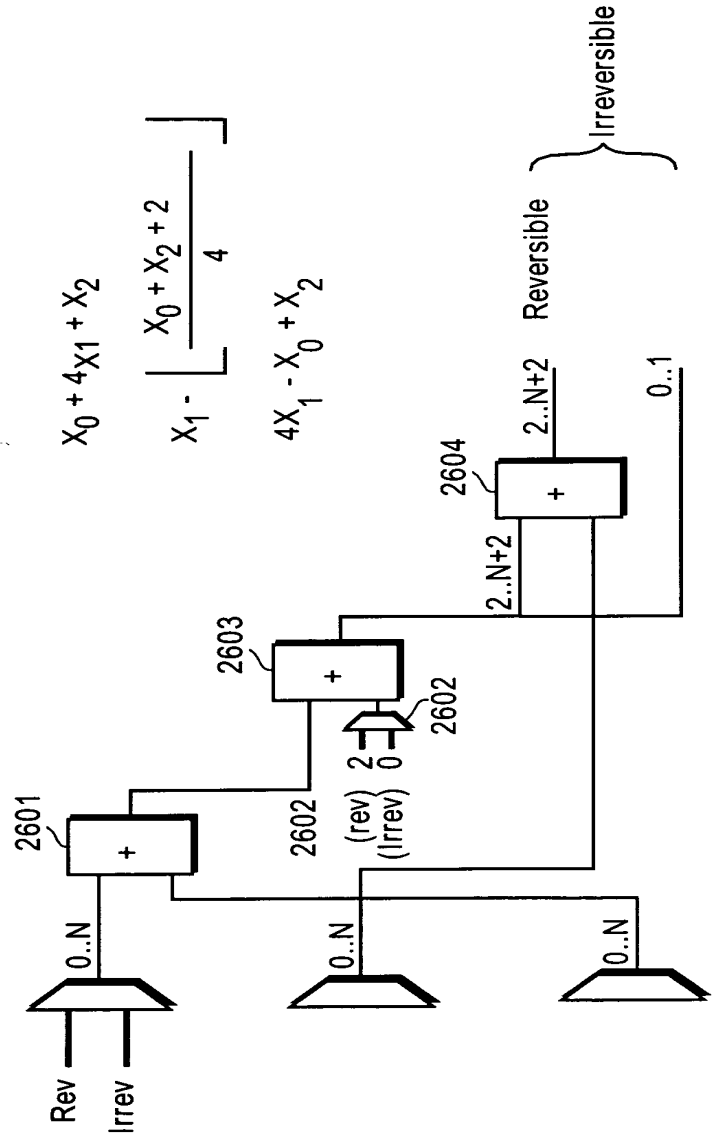
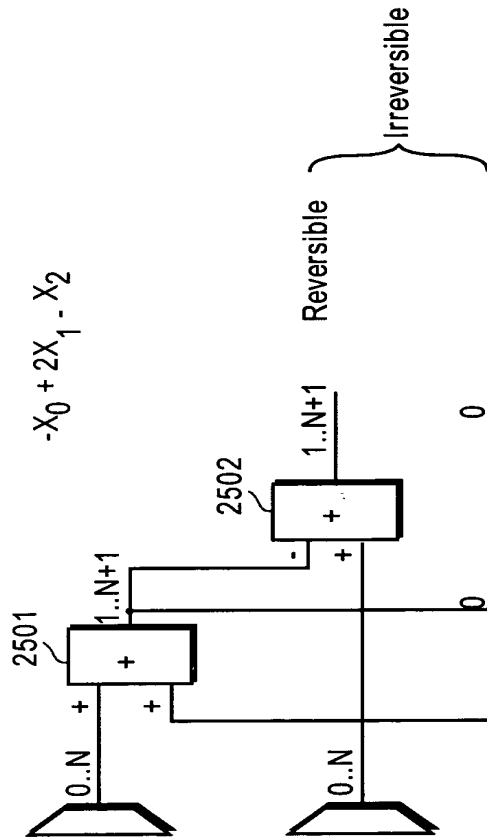


FIG. 22B





$$X_0 + 4X_1 + X_2$$

$$X_1 - \left[ \frac{X_0 + X_2 + 2}{4} \right]$$

$$4X_1 - X_0 + X_2$$

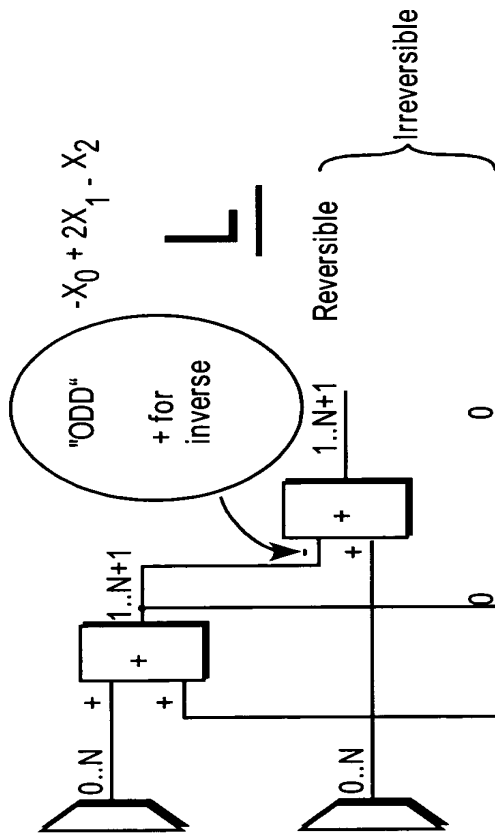


FIG. 25B

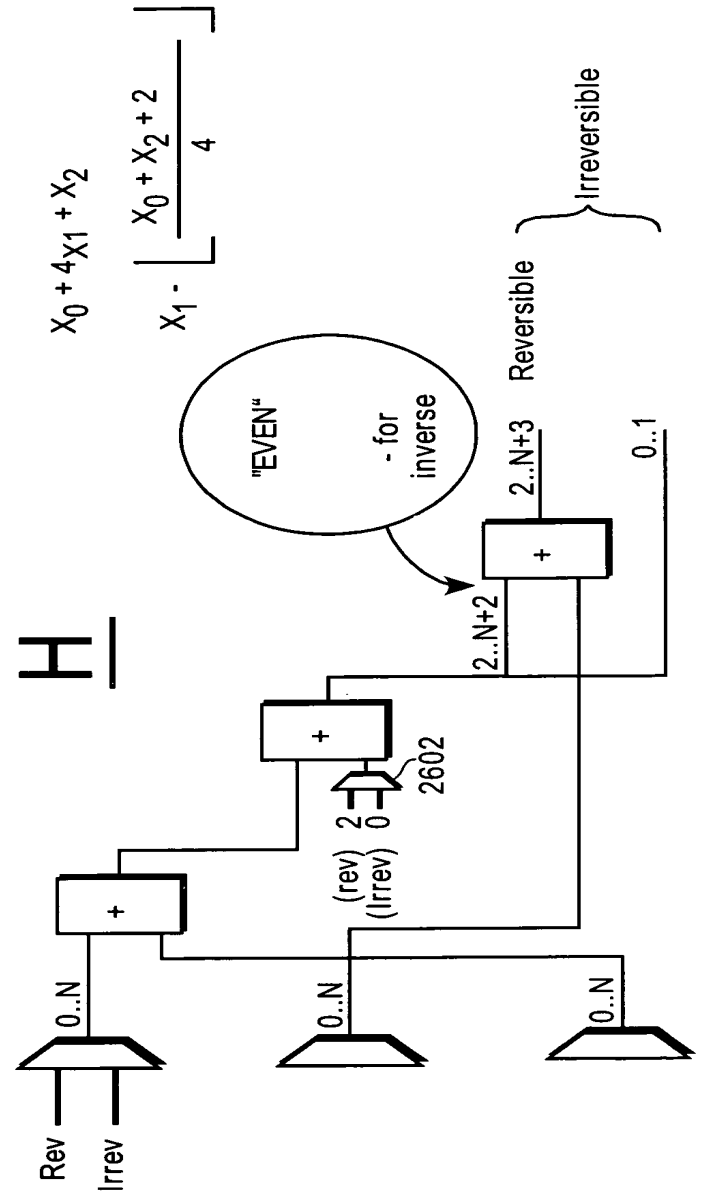
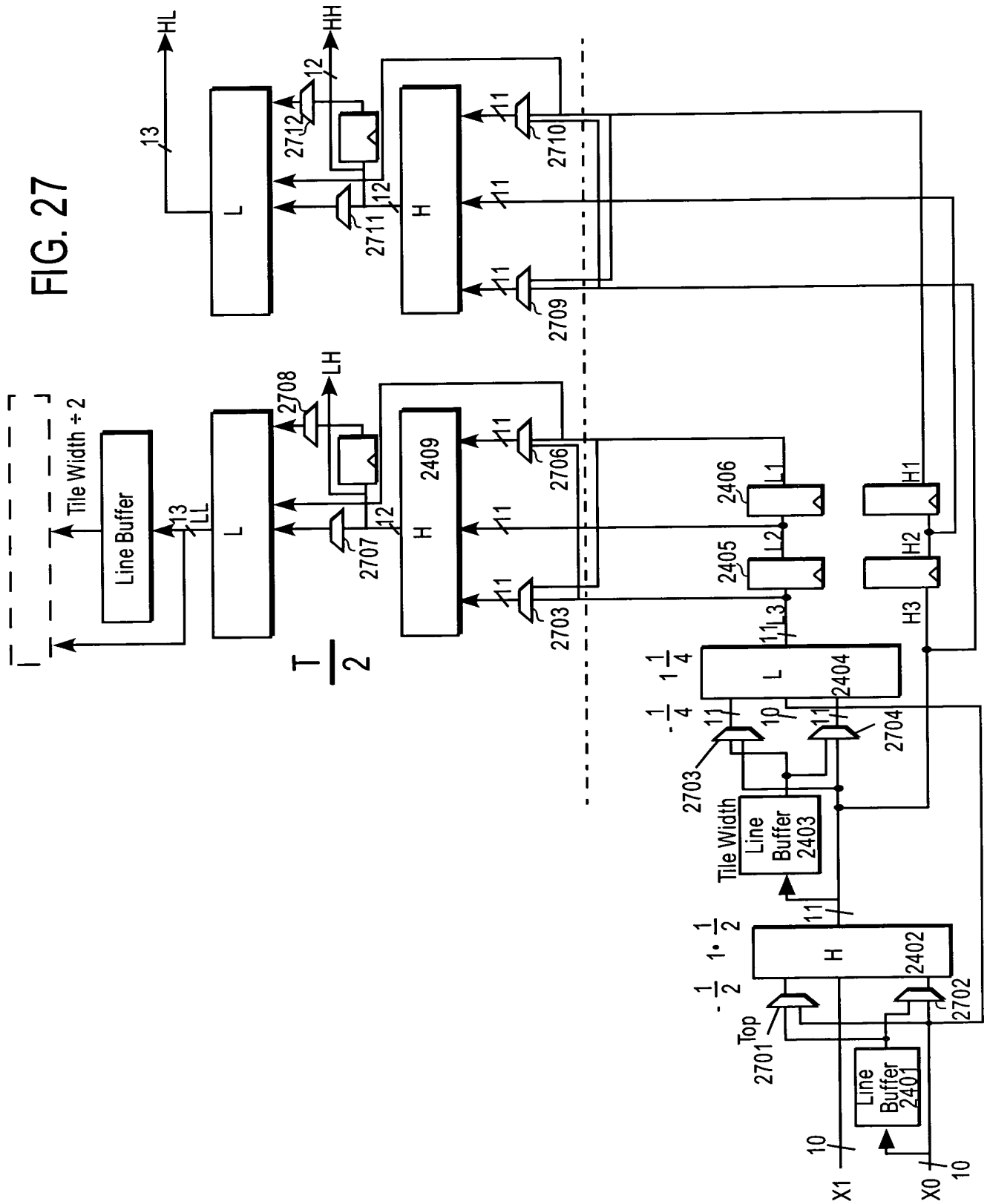


FIG. 26B

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FIG. 27





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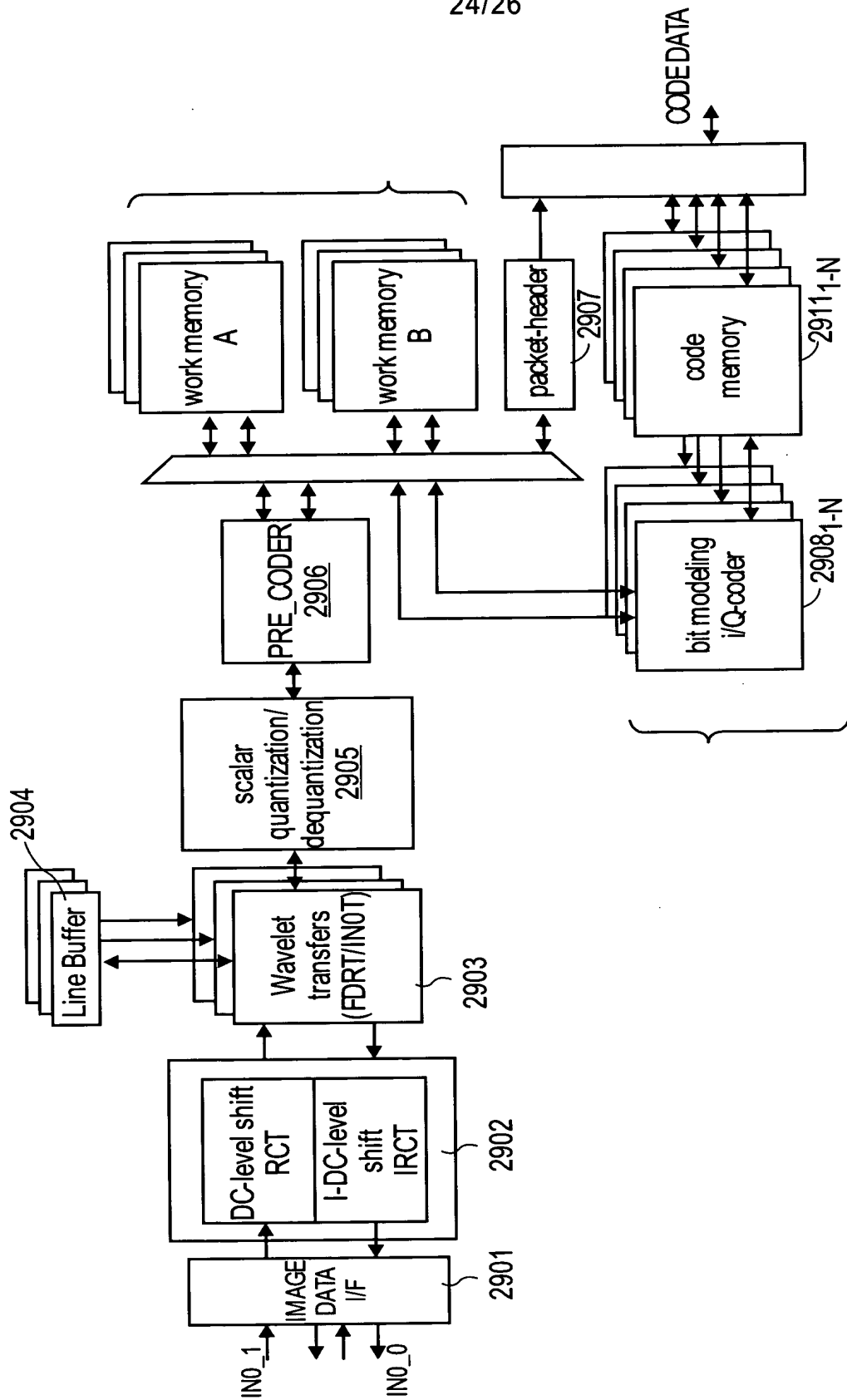


FIG. 29



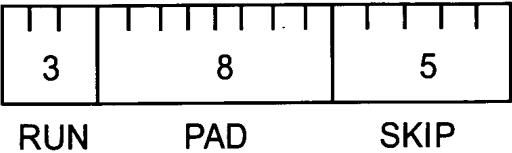


FIG. 30

8x8 region

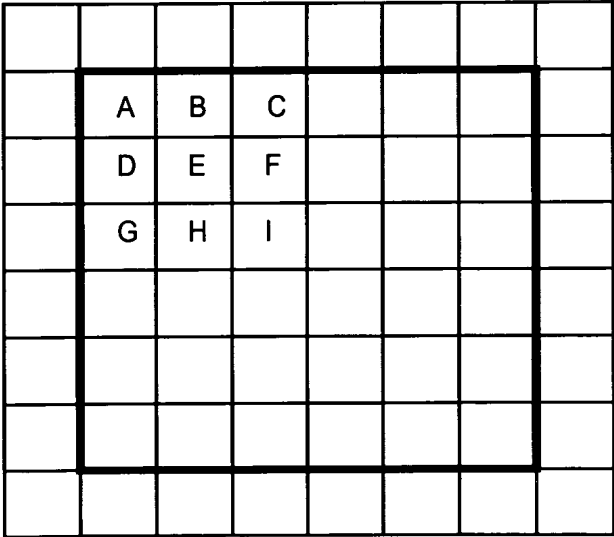


FIG. 31

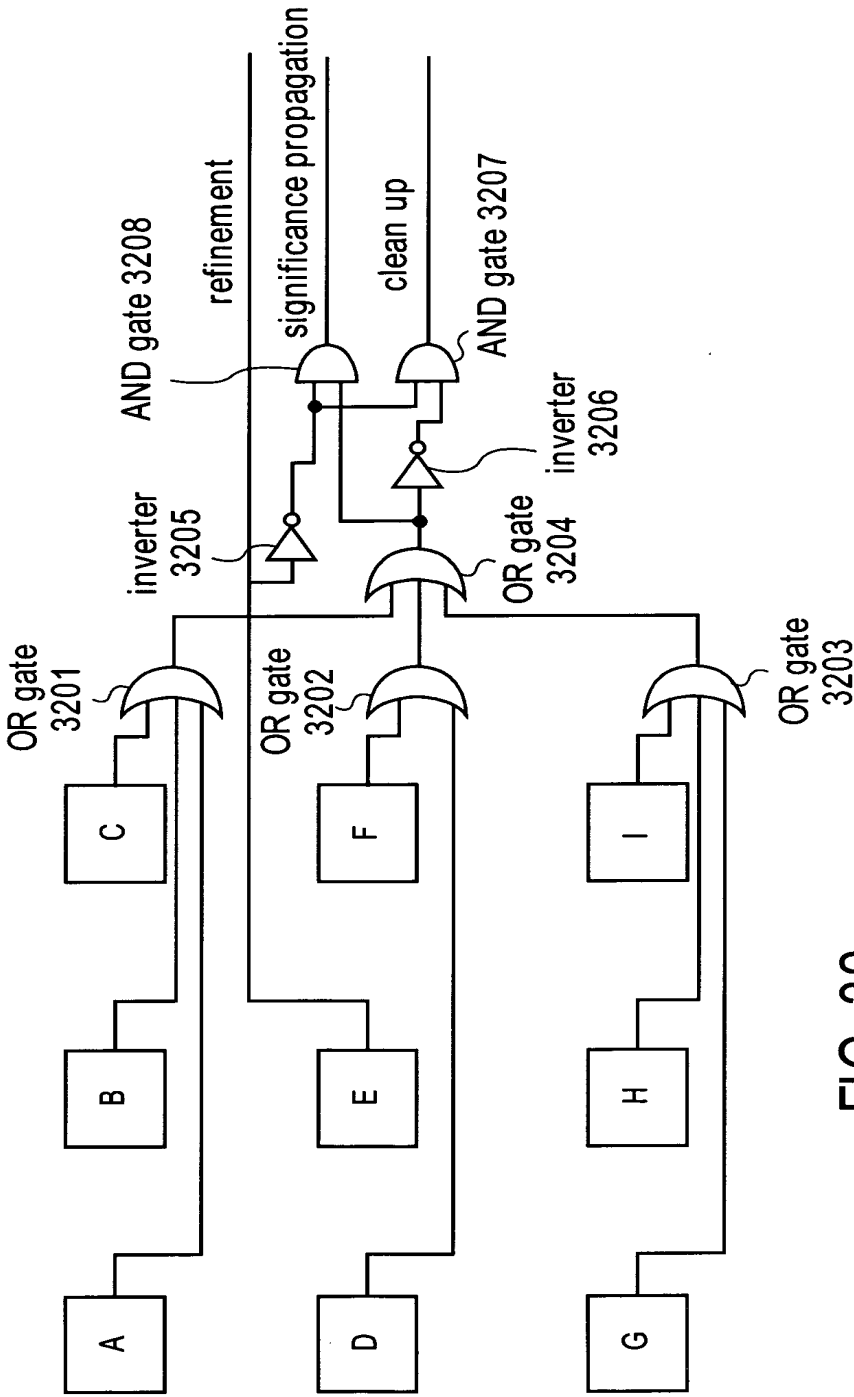


FIG. 32